

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001146**Date Inspected:** 31-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi, Xu Lefeng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Caltrans Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Ken Jobes, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, to randomly monitor welding and Quality Control (QC) functions. While on site, the QA Inspector observed and/or discovered the following:

The Caltrans QA Inspector randomly observed the manual Shielded Metal Arc Welding (SMAW) on the 89M Tower Mock-Up, Weld No. MUSB-MA26-30B-1. The welder was Han Xiao Feng (I. D. 054467), whose qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 7. ZPMC CWI, Chen Xi (CWI No. 07072021) as well as Bureau Veritas Inspector, Huang Li, were present during this welding. Welding Procedure Specification (WPS) WPS-B-T -3212-TC-U5b was used for this weld being made in the horizontal groove (2G) welding position. The QA Inspector noted that documentation of preheat/interpass temperatures, voltage, amperage and travel speed by the CWI were within the specified ranges of the WPS up until the time of the random observation. The QA Inspector also randomly measured the amperage and voltage by use of a calibrated Fluke amp/volt meter. The specified electrode, Excalibur 9018M H4R, 4.0 mm diameter, was being used and a portable electrode oven was in use and warm to the touch.

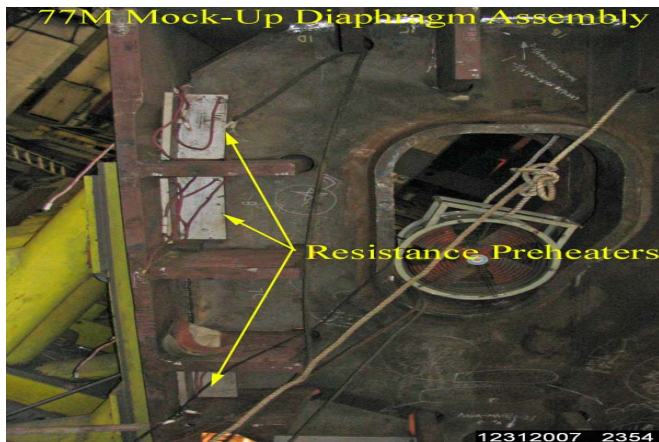
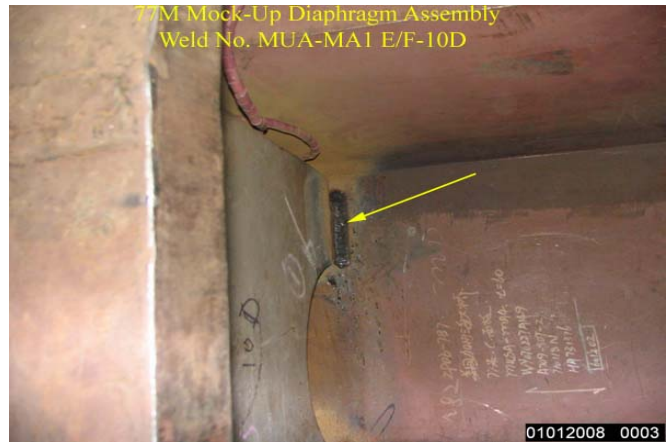
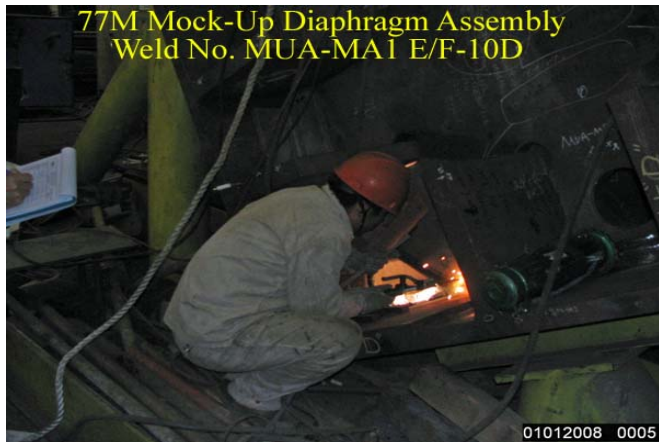
The Caltrans QA Inspector also randomly observed the manual Shielded Metal Arc Welding (SMAW) on the 77M Mock-Up Diaphragm Assembly, Weld Nos. MUA-MA1 E/F-9C, 11B, 10D and 12A. Weld No. MUA-MA1 E/F-10D was being welded by Cao Tao (I. D. 066163). Weld No. MUA-MA1 E/F-12A was being welded by Tan Xiangbo (I. D. 066459). Weld No. MUA-MA1 E/F-11B was being welded by Liang Yanhai (I. D. 066457). Weld No. MUA-MA1 E/F-9C was being welded by Ge Hongai (I. D. 037780). All four welders' qualifications for this welding are listed in ZPMC's Master List of Welders/Welding Operators/Tack Welders, Revision 7. ZPMC CWI,

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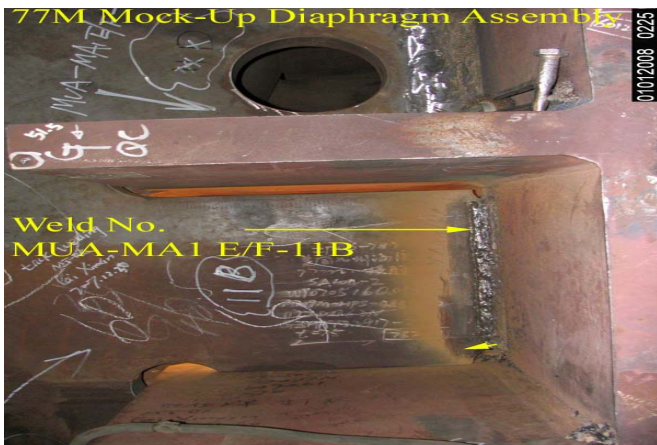
Xu Lenfeng (CWI No. 07031411) was present during this welding. Welding Procedure Specification WPS-B-T 4313-TC-P5-1 was being used for these partial joint penetration (PJP) welds being welded in the vertical groove (3G) welding position. The QA Inspector noted that documentation of preheat/interpass temperatures, voltage, amperage and travel speed by the CWI were within the specified ranges of the WPS up until the time of random observation. The QA Inspector also randomly measured the amperage and voltage by use of a calibrated Fluke amp/volt meter. The specified electrode, THJ506-Fe-1 (E7018-1) was being used and portable electrode ovens were in use and warm to the touch. A second random observation of the welding on the above four joints was made later in the shift. Four additional passes had been made on Weld Nos. 10D and 11B; and three additional passes had been made on Weld Nos. 9C and 12A. The QA Inspector noted that the documentation of parameters by the CWI was within the ranges specified on the WPS, and the specified electrode was being used from warm portable ovens.

All observations appeared to meet the requirements of the job specifications.



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Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Jobes, Kenneth

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer